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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/722,410	11/28/2003	Gavriel J. Iddan	P-5548-US	7399
49443	7590	06/23/2006	EXAMINER	
PEARL COHEN ZEDEK, LLP 1500 BROADWAY 12TH FLOOR NEW YORK, NY 10036			CONNELLY CUSHWA, MICHELLE R	
			ART UNIT	PAPER NUMBER

2874

DATE MAILED: 06/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/722,410

Applicant(s)

IDDAN, GAVRIEL J.

Examiner

Michelle R. Connelly-Cushwa

Art Unit

2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11/28/03</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Information Disclosure Statement

The prior art documents submitted by applicant in the Information Disclosure Statement filed on November 28, 2003 have all been considered and made of record (note the attached copy of form PTO-1449).

Drawings

Seven (7) sheets of formal drawings were filed on November 28, 2003 and have been accepted by the Examiner.

Specification

The abstract of the disclosure is objected to because the abstract includes more than one paragraph. Correction is required. See MPEP § 608.01(b).

Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-6, 10-12, 16, 17, 19, 21-24, 27 and 28 are rejected under 35 U.S.C. 102(e) as being anticipated by Balch (US 2004/0023249 A1).

Regarding claims 1, 2, 4-6, 10, 11, 16, 19, 21-24, 27 and 28; Balch discloses a device and a corresponding method for capturing an image (see Figure 9 and paragraph [0242]), the device comprising:

- an imager including at least a set of sensor elements (sensor array);
and
- a fiber plate cover (face plate) disposed on the set of sensor elements;
and
- an interaction chamber (reaction vessel);
- wherein the fiber plate (face plate) is configured to transfer an image of a sample (the sample is in the reaction vessel, which is placed directly on the face plate; see paragraph [0242]) in contact with an outer surface of the fiber plate cover (face plate) to the set of sensor elements (sensor array);
- wherein the imager captures an image with illumination (the illumination is from the excitation source; see Figure 9) from the direction of the sample (the sample is contained in the reaction vessel);
- wherein the fiber plate cover (face plate) is the only separation between the sample and the set of sensor elements (sensor array) and coherently transfers the image onto the sensor elements;
- wherein an indicator (biosite; see paragraph [0097]) is disposed in the interaction chamber (reaction vessel), the indicator (biosite) capable of reacting with a sample; and

- wherein the fiber plate cover (face plate) is in direct contact with the imager.

Additionally, regarding claims 19 and 27, the recitations “autonomous in vivo device” in line 1 of claim 19 and “microarray analysis device” in line 1 of claim 27 have not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

Regarding claim 3; the size of the sample in the transferred image is equal to the size of the sample in the image reaching the outer surface (the sensor array comprises of a plurality of smaller sensors such that the composite array approaches the surface area of the reaction vessel; see paragraph [0242]).

Regarding claim 12; the imager may be used to detect a color (wavelength) produced by the reaction (see paragraph [0213]).

Regarding claim 17; a shell surrounds the device (see Figure 1), wherein the shell comprises a fiber plate cover (i.e. it is noted that the fiber plate (fiber optic faceplate) covers the CCDs (sensor array) and that arrangement is further placed in an outer cover/shell as shown in Figure 1).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7-9, 13-15, 18, 20, 25, 26, 29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Balch (US 2004/0023249 A1).

Regarding claims 7 and 26; Balch discloses all of the limitations of claim 7, except for specifically stating that the fiber plate cover magnifies an image passing through the fiber plate cover. One of ordinary skill in the art would have found it obvious to position and form the fiber plate cover to magnify an image passing through the fiber plate cover by optimally locating the fiber plate cover and determining the dimensions of the fibers forming the plate cover to magnify the image in order to allow small scale samples to be readily and more easily viewed, especially since imagers are commonly used to magnify images in the art.

Regarding claims 8 and 9; Balch discloses all of the limitations as applied above, except for specifically stating that the device comprises a removable slide/fiber plate configured to hold a sample. Balch does disclose that the device comprises a reaction vessel (see Figure 9; and paragraphs [0095]-[0096]) that holds the sample, wherein the reaction vessel is generally thin and rectangular (see Figure 9) and may comprise reaction chambers, wells, microtiter plates, reaction substrates, etc. (see paragraphs [0095]-[0096]), and Balch does not disclose or suggest that the reaction vessel is fixed. One of ordinary skill in the art would have found it obvious to use a slide or fiber plate as

the reaction vessel in the invention of Balch, since both slides and fiber plates are well known, readily available, and commonly used to hold various samples during analysis processes. Furthermore, one of ordinary skill in the art would have found it obvious to have the reaction vessel, slide or fiber plate used to hold the sample in the imager disclosed by Balch be removable in order to provide a sample holder that may be easily cleaned and/or replaced, and to allow multiple samples to be pre-assembled in order to more efficiently analyze and compare multiple samples.

Regarding claims 14-15; the recitations "is configured for passing through a body lumen" in lines 1-2 of claim 14 and "is an autonomous in-vivo device" in lines 1-2 of claim 15 have not been given patentable weight because they are in narrative form and do not define an additional structural limitations. The recitation that an element is "configured to" perform a function is not a positive limitation but only requires the ability to so perform and does not constitute a limitation in any patentable sense. The image device of Balch is capable of providing an image in-vivo or when passed through a body lumen.

Regarding claim 18; Balch does not explicitly state that the device comprises a battery. However, one of ordinary skill in the art would have recognized that a power source would inherently be required for the device to operate and would have found it obvious to provide a battery as an optional power source in order to provide a compact power source and allow the device to be easily transported and positioned in a room without providing an additional power cord or requiring that an outlet be readily available.

Regarding claim 20; Balch does not specifically state that the fiber plate cover (face plate) is comprised of optical fibers aligned in parallel. Fiber optic faceplates, which Balch teaches are used in the invention in paragraph [0242], generally are formed from optical fibers aligned in parallel. Balch does not teach that the optical fibers forming the faceplate have any particular alignment. One of ordinary skill in the art would have found it obvious to use a fiber optical faceplate having optical fibers aligned in parallel in the invention of Balch, since optical fibers are typically aligned in parallel in faceplates, and there is no suggestion from Balch to have the fibers be positioned in any other manner.

Regarding claim 25; Balch does not specifically state that the interaction chamber is enclosed. However, one of ordinary skill in the art would have found it obvious to enclose the interaction chamber to prevent environmental contaminants from deteriorating the sample and the resulting image.

Regarding claims 13, 29 and 30; Balch does not specifically state that the device comprises a selectively permeable membrane in the interaction chamber. However, Balch does teach that the device is used to detect targeted molecules. One of ordinary skill in the art would have found it obvious to provide a selectively permeable membrane in the reaction vessel that allows the targeted molecules to permeate the membrane for sensing, while preventing other molecules from being sensed, since such arrangements are known and used to detect desired molecules in an effective manner.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Fujieda (US 6,885,439 B2); Takagi et al. (US 2004/0129891 A1); Matsumoto (JP 06-129908 A); Fujieda et al. (US 5,446,290); Higuchi et al. (US 2003/0118219 A1); Wu et al. (US 5,760,852); Jackson et al. (US 5,321,251) ; Sugawara et al. (US 2004/0218085 A1) ; Hajduk et al. (US 2003/0133113 A1) ; Nakamura et al. (US 5,835,142) ; and Metz et al. (US 5,986,746) each disclose related image devices.

Any inquiry concerning the merits of this communication should be directed to Examiner Michelle R. Connelly-Cushwa at telephone number (571) 272-2345. The examiner can normally be reached 9:00 AM to 7:00 PM, Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney B. Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general or clerical nature should be directed to the Technology Center 2800 receptionist at telephone number (571) 272-1562.


Michelle R. Connelly-Cushwa
Patent Examiner
June 16, 2006